

INTRODUCTION

1. Purpose

This manual is an outdoor sports facilities reference source primarily containing site planning information. Some design information and details are included as planning aids and general guidance.

2. Scope

Appendices A through F illustrate layouts for most outdoor recreational activities commonly played at military installations. Each sport has an outline text page of site planning and design criteria. The typical criteria categories are: Source used for Development; Recommended Area; Size and Dimension; Orientation; Surface and Drainage; and Special Considerations. Opposite this text page is a page showing details and site layout diagrams.

3. Application

Layouts and construction details in this manual are based on the published rules for the sport and will serve as guidance material. Design professionals will prepare actual construction drawings through selection of the appropriate layouts and details and site adaptation with proper grading and drainage to fit local conditions. Changes in playing rules may affect the dimensions and shapes of outdoor sports facilities. Therefore, the latest official rules of the governing body for each sport will be verified with the project drawings prepared in conformance with those rules.

4. Planning and design considerations

Some general planning and design considerations are listed below to complement the specific information found in this manual for each sport. Additional minor construction details are shown in appendix G, figures G-1 through G-5.

a. Lighting requirements. When lighting is required for extending the playing time of a sports facility, it must be justifiable in view of the Government Energy Reduction Program. The Illuminating Engineering Society (IE 5) publication "*Recommended Practice for Sports Lighting*," and pending illuminational levels given in the rules and regulations of the various classes of sports, will be consulted.

b. Support facilities. The availability of support facilities may influence the site planning and design of the facilities given in this manual.

(1) *Bleachers.* The number of seats and location will be dependent on the particular sport and service requirements. The structure may be portable in nature.

(2) *Storage facilities.* Equipment required for the support of a sport activity should be provided near the playing area. This unit may also house pertinent maintenance equipment.

(3) *Handicapped.* Design of all facilities will consider the needs of the handicapped, especially where spectators are involved.

c. Soil conditions. Existing soils affect site planning, design and maintenance of sports facilities for that area. Soils information and technical advice is available from local representatives of the U.S. Army Corps of Engineers.

(1) For sports played on natural turf surfaces, obtaining the best possible playing surface requires that special consideration be given to the nutrient qualities of the topsoil and irrigation as well as to the drainage characteristics of the subsoils.

(2) For sports requiring a paved surface of concrete, bituminous or other hard material, the subbase for the paving type required will be of inorganic material, well drained, and of sufficient depth to prevent frost heave.

(3) For structures such as the One, Three and Four Wall Handball Walls, the bearing capacity of the soils will be determined before the structures can be properly designed.

d. Metric dimensions. Some sports facilities shown are dimensioned in metric units. Metric units are used when the governing body of the sport has specified metric units in the rules and regulations. Many sports organizations do not yet recognize the metric system in their official rules and regulations and therefore, their playing areas are dimensioned in English units.

5. References

Appendix H provides a list of organizations whose rules, regulations, layout designs and construction details were used in the development of this manual. These organizations should be consulted for additional information as required.